U. S. Mint
31. Aug. 1868

Dr H. R. Linderman
Director U. S. Mint.

Dear Sir,

The Undersigned have examined the C.C. Vault, where the explosion occurred and herewith offer their opinion, that it was caused by the escape of city-gas into the vault, either from a leakage in the pipe or from neglect in turning off the gas at night. Upon opening the door in the morning and leaving it open for three quarters of an hour, the outer air, & the gas in the Vault, have become so mixed as to form the most explosive mixture, which could not escape spontaneously in so short a time, because of the large space in the vaulted arch above the door of the Vault, & the levity of the gaseous mixture, which retained it there. Hence the first flame would & did cause it to ignite instantaneously through the whole mixture, & hence the disastrous effects of the Explosion.

The remedy is simple & can be made perfect without impairing the Burglar-proof character of a vault. It is, to make tubular openings in the arches beneath the vault, & corresponding ones above, these last especially to open into the chimney.
We suggest that the remedy be applied to all the vaults of the Mint

Respectfully yours
Ja C Booth
Isaac S Cassin

RG104 entry 217 box 2

Mint of the United States
Philadelphia.
August 31, 1868

Dr. H.R. Linderman,
Director of the Mint

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The remedy is simple and can be made perfect without impairing the burglar-proof character of a vault. It is, to make tubular openings in the arches beneath the vault, and corresponding ones above, these last especially to open into the chimney. We suggest that the remedy be applied to all the vaults of the Mint.

Yours respectfully,
James C. Booth [Melter & Refiner]
Isaac S. Cassin [Chief Engineer]